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Sacrament of the Sun: Eschatological Architecture and Solar Geometry in a California Mission

Rubén Mendoza

California State University, Monterey Bay, rumendoza@csumb.edu

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SACRAMENT OF THE SUN

Eschatological Architecture and Solar Geometry in a California Mission

By Rubén G. Mendoza
California State University, Monterey Bay

FOR AS THE LIGHTNING COMES FROM THE EAST
AND FLASHES AS FAR AS THE WEST, SO WILL
BE THE COMING OF THE SON OF MAN.

Matthew 24:27

INTRODUCTION¹

Researchers in California and Southwest mission studies have generally not investigated a cluster of hidden traditions of sacred geometry² and Franciscan cosmology³ that are connected to the interpretation of the Christian *convento* as Hispanicized Indian cosmos.⁴ These traditions relate to millenarian eschatology,⁵ the syncretic mani-

festation of *Cristo-Helios* (the solar Christ) in Mesoamerica and the Southwest,⁶ and the long-standing tradition of solar Eucharistic worship that once held sway over Amerindian communities throughout the Americas.⁷ When these traditions are consciously placed in the foreground and studied within an astronomical and architectural context, the mission church can be understood as a kind of ecclesiastical computer or heliometer, anchored to solstice, equinox, and feast day azimuth orientations.⁸

¹ An earlier version of a portion of this paper, titled "Skywatchers of the Millennial Kingdom: Astronomy and Sacred Geometry in a California Mission," was presented before the triennial meetings of the 7th Oxford International Archaeoastronomy Conference, Northern Arizona University, Flagstaff, Arizona, June 25, 2004.

² Mardith K. Schuetz-Miller, "Survival of Early Christian Symbolism in Monastic Churches of New Spain and Visions of the Millennial Kingdom," *Journal of the Southwest* 42.4 (Winter 2000): 763–800.

³ John Leddy Phelan, *The Millennial Kingdom of the Franciscans in the New World*, 2nd Revised Edition (Berkeley: University of California Press, 1970).

⁴ Samuel Y. Edgerton, *Theaters of Conversion: Religious Architecture and Indian Artisans in Colonial Mexico*, Photographs by Jorge Pérez de Lara (Albuquerque: University of New Mexico Press, 2001).

⁵ Jaime Lara, *City, Temple, Stage: Eschatological Architecture and Liturgical Theatrics in New Spain* (Notre Dame, Indiana: University of Notre Dame Press, 2004).

⁶ Louise M. Burkhart, "The Solar Christ in Náhuatl Doctrinal Texts of Early Colonial Mexico," *Ethnohistory* 35.3 (Summer 1988): 234–256. See also Jaime Lara's "Helios Americano: la inculturación del culto solar en los virreynatos de Nueva España y el Perú," *Journal de la Société Internationale des Américanistes* (Paris, 1998), and "The Sacramented Sun: Solar Eucharistic Worship in Colonial Latin America," in *El Cuerpo de Cristo: The Hispanic Presence in the United States Catholic Church*, ed. Peter Casarella and Raul Gómez (New York: Crossroad, 1998).

⁷ J. L. Heilbron, *The Sun in the Church: Cathedrals as Solar Observatories* (Cambridge: Harvard University Press, 1999).

⁸ The first formal presentation of the central thesis of this work was presented at the 2002 annual meeting of the Gran Quivira Conference held in Tubac, Arizona. It was there that I had the op-



Figure 1: The 2003 midwinter solstice illumination of the gilded tabernacle located in the sanctuary of Mission San Juan Bautista. Note the rectangular window of light centered at the tabernacle and *retablo mayor* on an azimuth bearing of 126 degrees southeast. © Rubén G. Mendoza, 2003.

Recent observations carried out at Mission San Juan Bautista in California between 1995 and

portunity to share preliminary findings from San Juan Bautista with Mardith Schuetz-Miller, who first directed me to that work pertaining to sacred geometry. An illustrated public presentation before the California Mission Curators and Directors Conference titled "Theaters of Light" was given on September 3, 2003. This presentation first reported new findings at Missions San Carlos Borromeo, San Miguel Arcángel, Santa Bárbara, and Santa Clara de Asís. The majority of those California missions subjected to an on-site survey and analysis for a paper presented at the California Mission Studies Association Conference on February 14, 2004, were examined during January and February 2004. The CMSA paper, titled "Theaters of Light: Astronomy and Sacred Geometry in the California Missions," ultimately reported results indicating that eleven California missions and the presidio chapel of Santa Bárbara, all incorporated astronomically and liturgically significant azimuth orientations. An earlier version of this paper, presented at the 7th Oxford International Archaeoastronomy Conference on June 25, 2004, extended the analysis and preliminary findings in question to fourteen of eighteen Southwestern Pueblo mission churches and the Mexican sites of the Sierra Gorda, Querétaro.

2002 confirm the existence of a meridian, or astronomically significant architectural orientation of the Old Mission church at that site with the Midwinter solstice sunrise of December 21 and 22.⁹ In 2003, this study was extended to include the Basilica at San Carlos Borromeo del Río Carmelo. During the week of June 22, 2003, this investigator documented in film and video the Midsummer solstice illumination of the Eucharistic tabernacle there. Since that time, this investigator has documented astronomically or liturgically significant azimuth-based architectural alignments at nine other California missions and at the presidio chapel of Santa Bárbara.¹⁰

⁹The mission church at San Juan Bautista, California, is located at an elevation of 220 feet above sea level at 36 degrees, 50 minutes, and 45 seconds North latitude; and 121 degrees, 32 minutes, and 08 seconds West longitude. The 127-degree southeast (azimuth) orientation of the church is based on the reading obtained with a Brunton pocket transit.

Using the unique solar geometry of the Mid-winter solstice (azimuth) orientation of Mission San Juan Bautista, this paper seeks to shed new light on the eschatological architecture,¹¹ ecclesiastical iconography, and the syncretic adoption of *Cristo-Helios* in the liturgical theatrics of late eighteenth- and early nineteenth-century Franciscan Catholicism and Ohlone Costanoan neophyte religious practice on the California central coast. I contend that the now well documented manifestation of the *Cristo-Helios* of the Indian Church in the Americas influenced early efforts to orient monastic structures, particularly churches, so as to channel the sun's light toward the Eucharistic tabernacles.

The emergence of an eschatological architectural tradition was centered on the prophecy of the New Jerusalem or Millennial Kingdom and the earliest manifestations of the *Cristo-Helios* in the Americas. I will begin with sixteenth-century systems of thought, belief, and practice that fueled the proliferation of these occurrences in the New World of that time. I seek to correlate and extend the analysis of eschatological architecture, apocalyptic iconography, and solar geometry to the late eighteenth- and early nineteenth-century developments at Mission San Juan Bautista.

ADVENT OF THE MILLENNIAL KINGDOM

The writings of Fray Jerónimo de Mendieta (1525–1604) proved pivotal to the emergence of a newfound pattern of Franciscan millenarianism at the beginnings of the Spanish colonial era in

the Americas.¹² Inspired by the influential writings of Joachim de Fiore,¹³ Mendieta's prophetic mysticism emphasized the central role of Spain, particularly Spanish Franciscans, in establishing the *christianorum imperium* or universal monarchy. Mendieta believed that Spain was the New Jerusalem and its armies were the hosts of the New Israel in the Americas. In his view, the Spanish crown and its military and religious forces would ultimately serve as the gatekeepers of the impending apocalypse foretold in the Book of Revelations. By vanquishing Satan's "diabolical squadrons" of Jews, Muslims, and Gentiles, the armies and religious of the Spanish crown would herald the establishment of universal monarchy and the foundations of the Millennial Kingdom would thereby emerge from the ashes of the apocalypse.¹⁴ Thus the twin rallying cries of "*Santiago Matamoros*" (Santiago the Killer of Moors) and "*Santiago Mataindios*" (Santiago the Killer of Indians) proclaimed the building of Spain's "Kingdom of Heaven."¹⁵

¹² Jerónimo de Mendieta, O.F.M., *Historia eclesiástica indiana*, 4 vols. (Mexico: Editorial Salvador Chávez Hayhoe, 1945); Phelan, *Millennial Kingdom*, 124–25, argues that both Jerónimo de Mendieta and Gonzalo Tenorio "were both apocalyptic elitists" who held fast to the belief that the Indies were part of a "Providential masterplan" centered on a "terrestrial paradise" and an apocalyptic vision for the coming of the "universal monarchy of Christ." By contrast, Jaime Lara's *City, Temple, Stage* sets the stage for identifying the proliferation of eschatological architecture and hybrid indigenous themes in the ecclesiastical art and iconography of the Americas more generally.

¹³ Delno West, ed., *Joachim of Fiore in Christian Thought* (New York: B. Franklin, 1975); Delno West and Sandra Zimdars-Swartz, *Joachim of Fiore: A Study in Spiritual Perception and History* (Bloomington: Indiana University Press, 1983).

¹⁴ Ironically, despite a millenarian preoccupation with the New Jerusalem and the people of Israel, the establishment of the Holy Office of the Inquisition in 1569 led to the tandem suppression of any and all things of Hebrew or Jewish origin. This may in part explain the paucity of sanctioned documentation available for establishing the millenarian devotion to the New Jerusalem and its portrayal in Catholic liturgical contexts.

¹⁵ *Santiago Matamoros* constituted a battle cry against the Moors who conquered Spain in the early eighth century, and *Santiago Mataindios* was an early battle cry in the Spanish war on the indigenous peoples of Latin America.

¹⁰ Azimuth is defined as the "direction of a celestial object [such as the sun], measured clockwise around the observer's horizon from north . . . [such that] . . . an object due north has an azimuth of 0°, one due east 90°, south 180° and west 270°" (cf., <http://www.heavens-above.com/gloss.asp?term=azimuth>. Visited on March 9, 2005).

¹¹ I adopt Jaime Lara's (2004) use of the term "eschatological architecture" to define those dimensions of the monastic tradition that integrate symbols and icons specific to the Last Judgment. I take eschatological architecture to constitute any and all built environments that integrate an iconographic or symbolic vocabulary specific to a millenarian or apocalyptic tradition.

Mendieta believed that the earth would soon be torn asunder and endure great troubles that could only be reconciled with the return of the Messiah from the East.¹⁶ The Messiah's return would constitute the final contest against the forces of evil, a contest which had been waged since the dawn of human kind. It was the Messiah's quest to seek the restoration of peace by defeating Satan's "diabolical legions" which involved a prolonged struggle amid great bloodshed and violence. The result would be the establishment of the New Jerusalem and the advent of the Millennial Kingdom presided over by Jesus Christ. This Millennial Kingdom would culminate with the divine intervention of the "Last Judgment." For Mendieta, it was the mission of Spain's Catholic monarchs to pave the way for the establishment of the Millennial Kingdom with the blood of the enemies of the New Jerusalem.¹⁷

A number of recent scholarly works, notably that of Jaime Lara, argue that the essential elements of this millenarian crusade and apocalyptic vision for the future were integrated into the monastic art, iconography, and architecture of New Spain, and the Americas more generally.¹⁸ Most of these studies center on the monastic traditions of the early colonial era and culminate with the construction of the so-called "Fortress Monasteries" of mid- to late sixteenth-century central Mexico. I maintain that this eschatological tradition was still evident in the missions and monasteries of late eighteenth- and early nineteenth-century Alta California. While many of the specific eschatological symbols derive from the millenarian monasticism of sixteenth-century New Spain, I contend that the iconography of a late colonial-era California mission church, San

Juan Bautista (1803–1812), constitutes the survival or revitalization of the earlier solar Eucharistic traditions of the hispanicized Indian Church of Mesoamerica.

This investigation involves two additional questions. First, what liturgical influence did the widespread practice of solar Eucharistic worship play in the planning and design of the Midsummer solstice (azimuth) orientation of the mission church at San Juan Bautista? Second, if the mission church of San Juan Bautista constitutes an adobe model or archetype of the New Jerusalem described in the Book of Revelations, how does the eschatological manifestation of the Divine Sun of the Apocalypse, or the liturgical metaphors identified with *Sol Invictus* (Invincible Sun), *Sol Justitiae* (Sun of Justice), and *Cristo-Helios* play into the interpretation of the solar geometry of the California missions more generally?

ARCHITECTURE OF THE APOCALYPSE

Long-standing dedication and consecration rituals for Roman Catholic churches are preserved within the pages of *The Roman Missal*.¹⁹ One text in these rituals is particularly germane for our analysis: "Awesome is this place: here is the house of God and the gate of Heaven; it shall be called the court of God."²⁰ Ultimately, both the architecture of the divine and the divine architect were at the heart of the founding of each manifestation of the House of God, and thereby, the reopening of the Gate of Heaven.

¹⁹ Catholic Church, *Roman Seraphic Missal: Containing the Mass text from the Roman Seraphic missal and the prayers of the celebrant together with the ordinary of the Mass from the English-Latin Sacramentary* (Patterson, N.J.: Saint Anthony Guild Press, 1968).

²⁰ In Latin, "Terribilis est locus iste: hic domus Dei est, et porta coeli; et vocabitur aula Dei." Excerpt from the *Roman Missal*. See reprint translations of the original *Missale Romanum* first printed in 1474. For example, *Missale Romanum: ex decreto sacrosancti Concilii Tridentini restitutum summorum pontificum cura recognitum cum versionibus lingua anglica exaratis et a coetu episcoporum civitatum foederatarum Americae septentrionalis rite approbatis actis ab apostolica sede confirmatis*. This latter version published by the Catholic Church in 1964 (Novi Eboraci: Benziger Bros.).

¹⁶ Mendieta, *Historia eclesiástica indiana*; Jerónimo de Mendieta, O.F.M., Pedro Oroz, O.F.M., Francisco Suárez, O.F.M., *Relación de la descripción de la provincia del santo evangelio que es en las Indias occidentales que llaman la Nueva España hecha el año de 1585* (México: J. A. Reyes, 1947).

¹⁷ Phelan, *Millennial Kingdom*, 12–13.

¹⁸ Lara, *City, Temple, Stage*.

A growing number of scholars now contend that the belief that Spain's role in the New World was anchored and foretold in the apocalyptic visions of the time was so pervasive that the mendicant orders—specifically, Franciscans (1524), Dominicans (1526), and Augustinians (1533)—purposely integrated symbols and icons drawn from millenarian mysticism into the essential architectonic frameworks of each respective monastic tradition. This tendency was first manifest in the Americas in the legislative decrees and mandates of Viceroy Antonio de Mendoza (1535–1550), who enacted a building code regulating monastic architectural plans.²¹ Mardith Schuetz-Miller²² enumerates the many elements of this new architectonic code which embodied what were to become standard accoutrements of sixteenth- and seventeenth-century monastic architecture in New Spain or Mexico and the Americas.

1. Monastery churches would retain the traditional east–west orientation of the pre-Christian era;²³
2. The so-called House of Ministers or *Casa Parroquial* would abut the south wall of the main church or chapel;
3. The Porter's Lodge or *Portería* should front the atrium or *atrio* from the east;
4. The monastery *atrio* or forecourt would be walled and three gateways would be used to define the directional axis of said feature;
5. The portal of the main church should serve as the fourth gate with respect to its relationship to the *atrio*;
6. At the intersection of the axis defined by the alignments of the four portals of the *atrio* should be placed a tall cross;

7. The Open Chapel—*Capilla Abierta* or *Capilla de Indios*—used for conducting the outdoor mass to large groups of Indian parishioners congregated within the forecourt, was to abut the church on one side or the other;
8. At each of the four corners of the walled enclosure of the monastery forecourt were to be erected small pilgrimage chapels or *posas* used for processional circuits, or *pasos* and devotional offerings by the Indians.

Monastic architectural plans and physical plants varied, particularly from region to region, and some features such as *posas* and the *Capilla Abierta* were lost to the passage of time and changing local needs. Significantly, while much of Mendoza's code was largely geared to the emplacement and alignment of the church forecourt, much of the ecclesiastically defined iconographic ensemble of mission monasteries was then defined in terms of spatial relationships in turn borne of an east–west alignment of the main church.²⁴ The return of the Messiah from the East and the place of the rising sun, and thereby the orientation of the church and *sancta sanctorum*, was of paramount concern in this regard. According to Manuela Incerti:

From ancient times, it was not unusual in church projects to orient the apse in such a way that the religious or the faithful could see, during the celebration of the first mass, the sunrise as a symbol of the resurrection of Christ, Light of the World. For this reason, the first material act performed by the original builders was to determine the orientation of the building by tracing its main axis on the ground using poles and ropes.²⁵

²¹ Schuetz-Miller, "Survival of Early Christian Symbolism," 763.

²² Ibid., 763–764.

²³ The contact-era Christian churches of Ireland, England, Italy, and Alpine Churraetia have all recently come under scrutiny for similar such alignment orientations identified with pre-Christian traditions. See Randon Matthew Newman Jerris, "Alpine Sanctuaries: Topography, Architecture, and Decoration of Early Medieval Churches in the Bishopric of Chur," 2 Volumes (Ph.D. diss., Department of Art and Archaeology, Princeton University, 1999), for one such example.

²⁴ Schuetz-Miller, "Survival of Early Christian Symbolism," 763.

²⁵ Manuela Incerti, "Solar Geometry in Italian Cistercian Architecture," *Archaeoastronomy* 16 (2001): 3–23. By contrast with Incerti's observations (p. 9) of Italian Cistercian monastic architecture, in which windows were incorporated into the walls above the apse or altar area, the early missions of California rarely, if ever, incorporated such features in such contexts. The illumination of the tabernacle by way of a window set into the eastern or main façade of the main church at San Juan Bautista is here thought to have provided a particularly distinct mechanism for illuminating the apse, *retablo mayor*, and/or tabernacle.

Ecclesiastical and cosmological elements inherent in Franciscan monastic architecture were many and legion but not often made apparent from the form or dimensions of the physical layout alone.²⁶ For instance, the *atrio* constitutes an architectural feature with origins in the Middle East, and an association with both the Marian cult and the cult of Martyrs—a product of the late fourth century.²⁷ The atrium, like its courtyard complement, was intended to symbolize and/or constitute the earthly counterpart to the “Field of Paradise” itself and was the physical manifestation of the New Jerusalem described in

²⁶ Edgerton, *Theaters of Conversion* offers a host of examples spanning New Spain and the American Southwest.

²⁷ Schuetz-Miller, “Survival of Early Christian Symbolism,” 767.

the Book of Revelations (12: 10–14, 22–23). The associated porticos were intended to signal the transit of the processional route that served to reenact the passion of the Christ and the *Via Crucis* or Stations of the Cross.²⁸ At the behest of Pope Innocent XI, the Franciscans eventually introduced paintings of the *Via Crucis* into church sanctuaries in 1686.²⁹ These paintings ultimately served to complement extant architectural manifestations of the *Via Crucis* embodied in the architectural plan of mendicant monasteries the world over.

A cross or fountain, symbolizing the light or font of redemption, was positioned at the center of the *atrio* of the mission or monastery.³⁰ The Book of Revelations (7: 17; 14: 1–2; and 22: 1–2) equates the River of Life and “springs of living water” with the throne of God and with the Lamb of God, the incarnation of the Messiah in his guise as blood offering *par excellence*.³¹ Significantly, it should be noted that many, if not virtually all of the original wooden doors installed within the church sanctuary and *Casa Parroquial* or convent at Mission San Juan Bautista were in fact carved to represent the living water or River of Life. The Book of Revelations (22: 1–2) in fact describes the River of Life “flowing from the throne of God and the Lamb—on each side of the tree of life.”³² Ultimately, the river of life symbolizes the blessing of eternal life that issues from

²⁸ Norman Neuerburg, *The Indian Via Crucis from Mission San Fernando: An Historical Exposition* (Santa Bárbara: Santa Bárbara Mission Archive-Library, 1998), 4–11.

²⁹ *Ibid.*, 9.

³⁰ Alan R. Sandstrom, “Nahua Blood Sacrifice and Pilgrimage to the Sacred Mountain Postectli, June 2001,” FAMSI Website [Foundation for the Advancement of Mesoamerican Studies, Inc., <http://www.famsi.org/reports/01001/index.html>]. Date posted: August 9, 2001. Sandstrom discusses contemporary Nahua Indian conceptualizations of the cross as a symbol for the light of the solar fire. According to his study, “the cross represents the solar fire, the life-giving heat that animates the cosmos.”

³¹ Schuetz-Miller, “Survival of Early Christian Symbolism,” 767.

³² *Ibid.*, 767.

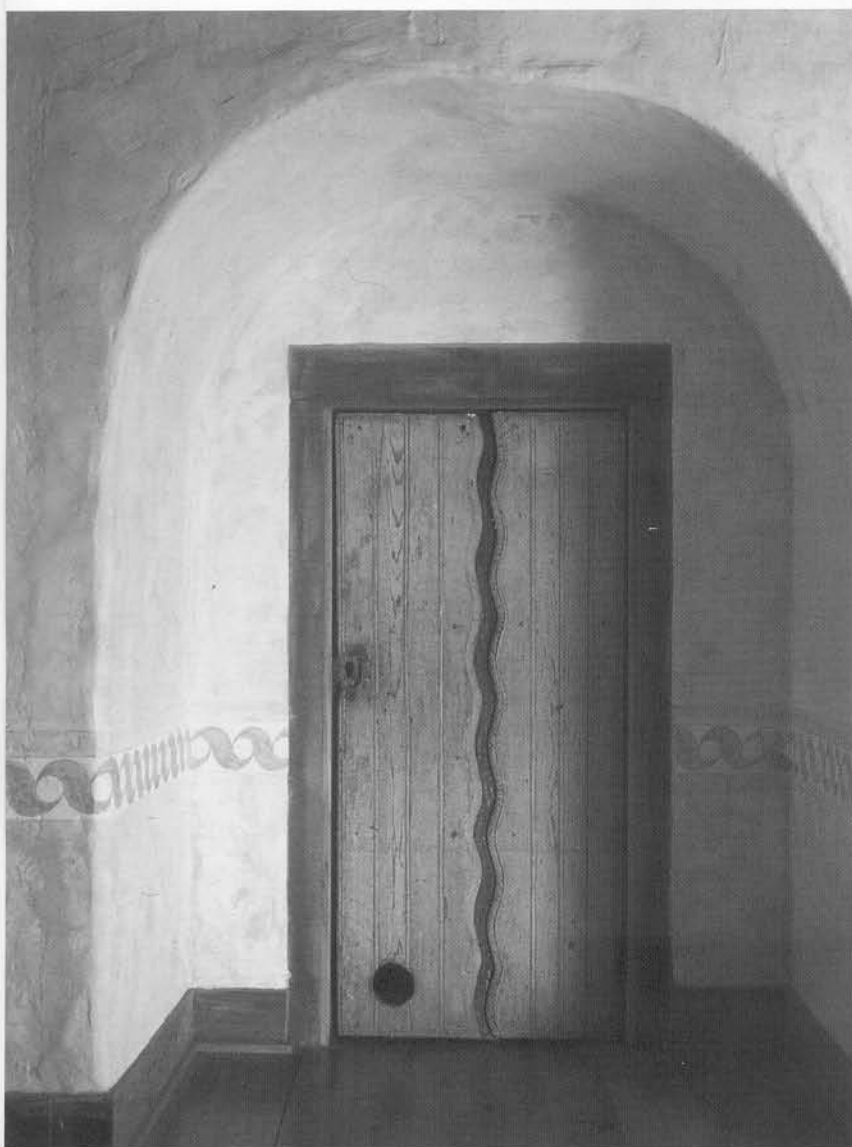




Figure 2: Celestial or divine light emanates from this central image of the patron saint contained within the body of the *retablo mayor* of Mission San Fernando Rey de España. Conservator Sir Richard Menn assembled and then installed this sixteenth-century Spanish altar screen during the course of restorations at the mission.
© Rubén G. Mendoza, 2004.

the heart of the New Jerusalem or Kingdom of Heaven.³³ Those who believe in God and permit him to satisfy their “spiritual thirst” shall be redeemed.³⁴ It is my contention that the many depictions of the River of Life at San Juan Bautista were intended to symbolically convey the vision from the Book of Revelations (14: 1–2) of the Lamb of God standing atop Mount Zion, from which came “a sound from heaven like the roar of rushing waters and like a loud peal of thunder.” The symbolism is reinforced by the fact that the Lamb of God stands at the foot of the

Figure 3 (opposite): Wooden doorway carved to depict the River of Life from the original *camarín* now located in the Chapel of Guadalupe at San Juan Bautista. Note the restored wall paintings depicting the Franciscan cord that symbolized the rope with which Christ was bound.
© Rubén G. Mendoza, 1998.

bulto of San Juan Bautista at the very epicenter of the *retablo mayor* of the *sancta sanctorum*.

The whitewashed stone and adobe buildings that characterize the missions of California offer an additional element of ecclesiastical iconography. The association of the color white with purity, divinity, and light, further accentuates the iconographic ensemble of the architectonic whole. It is in part due to this association that the

³³ The Tree of Life was formulaically symbolized by the planting of a large wooden cross in the forecourt of the church. Unfortunately, at San Juan Bautista, the massive wooden cross that once stood immediately in front of the *propylaeum*-like portico which supports the façade within which the solstice window is situated, has since been removed as the result of storm damage.

³⁴ *Life Application Study Bible: New Living Translation* (Wheaton, Illinois: Tyndale House Publishers, 1996).

Roman Missal mandates that white cloth be used to cover and embellish the altar stone during the Liturgy of the Eucharist.³⁵

The exterior and interior walls of the church and monastery complex at Mission San Juan Bautista bore the brilliance of the “divine” white light of the Heavenly Kingdom in the form of a white lime stucco treatment or whitewash. However, the interior of the main sanctuary of the church as well as the *camarín* (dressing room for the *bultos* [*santos*])—were painted along the entire course with an unbroken representation of the Franciscan knotted cincture.³⁶ The cincture symbolized the rope with which “Christ was bound to the column and is symbolic of poverty, chastity, and obedience.”³⁷ These virtues formed the basis for that asceticism that bound the members of the Order of the Friars Minor to priestly chastity and purity. Indeed the prayer recited when fastening the cincture was: “Gird me, O Lord, with the girdle of purity.”³⁸ The presence of the painted cincture along the otherwise whitewashed walls of the church further reinforced the identification of the mission sanctuary with purity and divine light.

Mardith Schuetz-Miller also argues that the archangels themselves may be identified with respect to church bell towers and the cardinal

directions. She contends that the dual emplacement of bell towers—that traditionally thrust skyward over many a New World church and mission site—were intended to symbolize archangel San Gabriel for the north tower and archangel San Miguel for the south tower.³⁹ This latter observation has been documented in Old World contexts and is seemingly validated for New World sites by one additional observation pertaining to the liturgy and Book of Revelations. San Gabriel is the messenger of the word and the herald of the Apocalypse while San Miguel is both the apocalyptic warrior and primordial defender of the faith. By this tandem placement, the herald of the Messiah’s apocalyptic return from the east, and the defender and crusader of the faith stand as silent sentinels at the forefront of the Field of Paradise and the New Jerusalem embodied in the layout of the colonial era monastery.⁴⁰ It is not surprising that melded into this sacred landscape and bulwark of ecclesiastical iconography there can be found a treasure trove of elements that hearken to the essential identification of the monastery and its mission church with the New Jerusalem and the Field of Paradise writ large.⁴¹

³⁵ According to the “General Instruction of the Roman Missal” (Committee on the Liturgy 2003, Section 304), “out of reverence for the celebration of the memorial of the Lord and for the banquet in which the Body and Blood of the Lord are offered on an altar where this memorial is celebrated, there should be at least one white cloth, its shape, size, and decoration in keeping with the altar’s design” [Emphasis added].

³⁶ Sir Richard Menn, the curator of the Diocese of Monterey, recently noted (by way of personal communications of July 28, 2004) that the late art historian Norman Neuerburg recovered documentation making specific reference to the so-called “Indian Chapel” as a *camarín*. Significantly, such *camarín* were typically situated behind the main altar area of any given church, and were utilized as areas for dressing the statues of the saints, and for keeping of such devotional imagery and or statuary.

³⁷ Schuetz-Miller, “Survival of Early Christian Symbolism,” 784–785.

³⁸ Cited from the *New Advent* website at <http://www.newadvent.org/cathen/03776a.htm>. Visited on March 10, 2005.

³⁹ Schuetz-Miller, “Survival of Early Christian Symbolism,” 782–783.

⁴⁰ Archaeological monitoring undertaken during the placement of a monument to Fray Fermín Francisco de Lasuén just prior to the 1997 bicentennial celebration at Mission San Juan Bautista ultimately determined that the foundations for two bell towers had been completed at that site. I believe the earthquake of 1812 forestalled further attempts to complete the bell towers whose foundations have been identified archaeologically by this investigator.

⁴¹ Within the context of the large-scale (regional) sacred geometry of the California missions, it is perhaps no surprise that the feast day of the archangels San Miguel (September 29) and San Gabriel (March 24) constitute “mirror dates” for the illumination of the Eucharistic tabernacles at each site on those respective dates. In this instance, each mission site and archangel has taken the place of the other. Whereas Mission San Gabriel’s patron saint is identified with the north, and Mission San Miguel’s is identified with the south, in this instance each mission and archangel occupies the location of the other. Because each feast day falls within a few days of the equinoctial sun, each site shares both a vernal and autumnal illumination of the Eucharistic tabernacle each year.

ECCLESIASTICAL COSMOLOGY

The *conversión*⁴² or *misión* of San Juan Bautista has been the focus of an archaeological field program under my direction since the fall of 1995.⁴³ While the prime objective of those investigations undertaken at San Juan Bautista centered on (a) the archaeological recovery of the original mission *convento* complex, and (b) the mapping of recovered quadrangle foundation features, a tertiary objective included (c) the analysis of the ecclesiastical cosmology of the Old Mission Church and surviving *convento* or *Casa Parroquial* room block.⁴⁴ As the archaeological investigations at San Juan Bautista developed, I became increasingly interested in the mission's cosmological ecology. After concluding a preliminary architectural history of the mission church constructed by Ohlone Mutsun Indian converts under the

direction of Fray Felipe Arroyo de la Cuesta from 1803 to 1812, I was drawn to what appeared to be a numerological symbolism that was incorporated into the architectonic framework of that ancient building.⁴⁵ After more analysis, I came to believe that the iconography of the *retablo mayor* and of the whole mission church, manifests elements derived directly from eschatological accounts of the New Jerusalem presented in the Book of Revelations (21: 10–14, 22–23).

In the writings of Ezekiel and the apocalyptic Book of Revelations, the New Jerusalem is comprised of a mansion or fortress of light that incorporates twelve gateways, twelve foundations or pillars, and twelve guardian angels. These symbolize the twelve tribes of Israel and the twelve apostles or saints who serve as the gate keepers and tutelary guardians of the New Jerusalem. Significantly, the scriptural account in question explicitly notes that three of the gateways of the great wall that encircles the New Jerusalem are oriented (in order of importance) to the east, three to the north, three to the south, and three to the west.⁴⁶ The whole of the edifice (citadel) of the New Jerusalem is said to glow amidst the brilliance of divine, celestial, or white light likened to the glow of jasper and crystal. These are cited as two of twelve gems or stones that constitute the walls and facades of the luminous glass and gem-like Kingdom of Heaven. The massive dimensions of the New Jerusalem, its huge perimeter wall, and the Altar of Holocausts (*Ariel Altaris*) are discussed in minute detail in Ezekiel (40–43) and the Book of Revelations (21–22).

⁴² According to James E. Ivey, the term "*conversión*" is in fact the correct term for what today is more popularly known as "*misión*," as in Mission San Juan Bautista. The term "*misión*" on the other hand, is the term used to designate the gospel message conveyed by the individual missionary. See James E. Ivey, *In the Midst of a Loneliness: The Architectural History of the Salinas Missions*. Salinas Pueblo Missions National Monument Historic Structures Report. Southwest Cultural Resources Center Professional Papers, No. 15 (Santa Fe: Southwest Regional Office National Park Service, 1988).

⁴³ Rubén G. Mendoza, "Archaeology, Multimedia, and Online Collections Management for Old Mission San Juan Bautista," *Southwestern Mission Research Center Newsletter* 33 (1999): 22–28; Rubén G. Mendoza, *San Juan Bautista: An Archaeologist's View of an Early California Mission* (Sacramento: California Missions Foundation, 2002); Rubén G. Mendoza, "This Old Mission: San Juan Bautista, Archaeology, and the Hispanic Tradition," *Hispanic Outlook in Higher Education* 12.9 (2002): 28–31.

⁴⁴ It should be noted that my respective interests in cosmological iconography derive from earlier studies, published in 1975 and 1977, that targeted the structural analysis and interpretation of the iconographic vocabulary incorporated into the architectonic framework of the monolithic temples of the pre-Hispanic site of Malinalco, Mexico. See Rubén G. Mendoza, "Worldview and the Monolithic Temples of Malinalco, Mexico: Iconography and Analogy in Pre-columbian Architecture," *Journal de la Société des Américanistes* 64 (1977): 63–82; Rubén G. Mendoza, "The Náhuatl Temples and their Relationship to Cosmology: The Testing of an Hypothesis," *Southwestern Anthropological Association Newsletter* 15.1 (1975): 3–8.

⁴⁵ Rubén G. Mendoza, James "Rob" Lecel, and Kyle Thompson, "Lasuén's Legacy: A Comparative Architectural History of Two California Missions," California Mission Studies Association Conference, Mission San Luis Obispo, February 14, 2004.

⁴⁶ I am currently looking into the possibility that the founding and/or construction dates specific to each of those astronomically significant azimuth-oriented mission churches under study may constitute individual elements contained within a broader pattern of sacred geometry rendered writ large.

CONJURING THE HEAVENLY KINGDOM

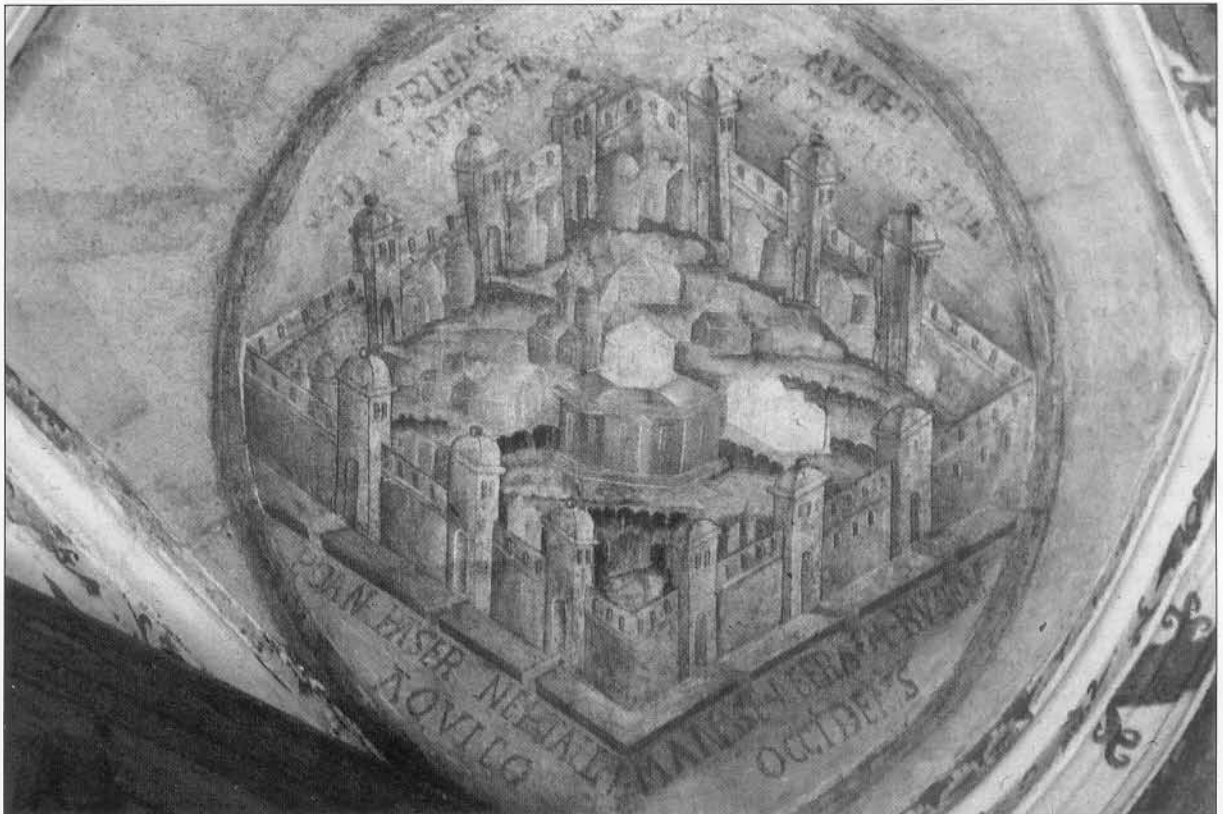
In a recently published study of the eschatological architecture and liturgical theatrics of the Mexican monasteries of New Spain, Jaime Lara has identified a significant amount of architectural and artistic evidence for portrayals or liturgical references to the New Jerusalem. In his analysis of the murals of the “Apocalypse Cycle” painted by the Indian artist Juan Gerson within the Franciscan foundation at Tecamachalco, Puebla, Mexico, we find a constellation of motifs drawn from both the works of Ezekiel and the Book of Rev-

elations. Of specific significance are those portrayals that have a bearing on how the hispanized Indian peoples of Mexico portrayed the Millennial Kingdom and the New Jerusalem. The accompanying photograph of the mid-sixteenth century painting by Juan Gerson of “The Heavenly City of Jerusalem with the Temple represented as the Dome of the Rock” was rendered on the gothic vaulting located immediately above the area of the baptismal font and confessionals at Tecamachalco. According to Jaime Lara,

The paintings act as a corona around the place of baptisms and confessions ... two sacraments that bring one into salvation, the Church, and a state of grace necessary for entrance into the rewards of the Heavenly Jerusalem. In this reading, the events of Revelation—soon to unfold on earth—will similarly be the temporal threshold to eternity.

Figure 4: Detail of the mural by Juan Gerson at Tecamachalco, Puebla, Mexico, that depicts the “Heavenly City of Jerusalem with the Temple represented as the Dome of the Rock.”

© Courtesy of Dr. Jaime Lara, Yale University Divinity School and Yale Institute of Sacred Music.



Juan Gerson's mural painting of the Heavenly City of Jerusalem is of particular interest since it depicts key elements of the utopian city, temple, and holocaust altar described at great length in Ezekiel 40, 41 and 43 and the Book of Revelations 21–22. In Ezekiel 43: 13–17, the Altar of the Holocausts is described. This altar was depicted in the sixteenth century murals of Tecamachalco. The altar itself is situated atop three square platforms or ledges. The altar platform at San Juan Bautista was similarly situated atop three tiled platforms or steps that form a square that was in turn situated atop a floor consisting of three additional tiled platforms that form the floor of the *retablo mayor* and *sancta sanctorum*.⁴⁷ The whole of the two (three-stepped) platforms rests atop a single lower platform. Access to the *sancta sanctorum* and Eucharistic tabernacle would have required the liturgical minister to ascend seven steps to the summit that held the altar platform itself. Given that the numbers seven and twelve figure prominently within the Book of Revelations, it is perhaps no surprise that this numerical allusion to the notion of perfection would be embedded into the floor of the main altar at San Juan Bautista. The whole of the altar platform in turn fronts the three-aisled floor plan of the mission church. The nave is lined by the twelve massive columns which support the fourteen archways that constitute the arcade of the church interior. Within the context of the eschatological analysis presented here, I would contend that the altar platform contained within the *sancta sanctorum* of San Juan Bautista essentially replicates the Altar of Holocausts described for the New Jerusalem of the Old Testament writings of Ezekiel.⁴⁸

⁴⁷ The three-stepped pedestal or platform atop which the main altar sits has been modified into and from a four stepped platform. This analysis is based on the configuration apparent from prior modifications made in the 1950s. The Works Progress Administration architectural plans of 1936 remain the most detailed depictions of the altar area of the Old Mission church, and thereby support, the description rendered herein.

Further, the *retablo mayor* and the attendant side altars within the mission church of San Juan Bautista are subdivided into hand painted *nichos* or portals grouped into sets of three. The main altar screen incorporates two sets of three *nichos* for a total of six, which was subdivided into an upper tier and a lower tier oriented to the east. Each of the two side altars similarly included painted altar screens adorned with renditions of the *nichos* contained within the *retablo mayor* and housed six distinct *bultos*.⁴⁹ Each of those *nichos* housed within the main, redwood-plank altar screen are occupied by six hand carved *bultos*. One of them is San Juan Bautista. The other five *bultos* of the *retablo mayor* include (a) San Isidoro who is identified with agricultural fertility and animal husbandry, (b) San Juan Bautista and San Pascual Bailón who are both associated with the cult of the Eucharist and Midsummer solstice rites,⁵⁰ (c) San Antonio de Padua who represents poverty and the poor, (d) San Francisco de Asís, founder of the Franciscan order, and finally, (e) Santo Domingo, founder of the Dominican order.⁵¹ Of particular interest is the presence of representatives of the Franciscan and Dominican orders, identified with that "favoritism for the preaching orders which was almost certainly deliberate, as they were commonly held to be the heralds of

⁴⁸ Lara, *City, Temple, Stage*, 80–82, Fig. 2.50, for a depiction of the Altar of Holocausts.

⁴⁹ According to Sir Richard Menn (Personal Communication from Menn to Mendoza, July 28, 2004), the hand-painted murals that constitute the original side-altar *retablos* remain fully intact beneath a layer of stucco used to recondition the walls of the church sanctuary. According to Menn, Sir Harry Downie, the Diocesan conservator in charge of those renovations undertaken in the mid-1970s, carefully concealed the side-altar murals under a layer of protective sheeting so that the murals would not be damaged during the course of renovations.

⁵⁰ Both San Pascual Bailón and San Juan Bautista are venerated in the Philippines and other Hispanic colonial contexts throughout the world, as per their specific relationships to the rites of the Midsummer solstice sun.

⁵¹ According to the *Yifonnes de la Misión de San Juan Bautista* for December 31, 1819, the *bulto* of San Pascual Bailón was received and installed by December 1819.



Figure 5: Scale model of the church and quadrangle enclosure at San Juan Bautista. Note the three arched portals of the portico and main façade. The rectangular window located just above the central archway of the portico is aligned on the azimuth of the Midwinter solstice at 126 degrees east of north. © Rubén G. Mendoza, 1998.

the second coming of Christ and the Last Judgment.”⁵²

In a recent personal communication, Sir Richard Menn noted that the *nicho* located at the center of the upper tier of the *retablo mayor* at one time housed the image of the Virgen de Guadalupe that currently hangs in the Chapel of Guadalupe at San Juan Bautista.⁵³ The image of

Nuestra Señora de la Soledad, which currently occupies the western side altar of the sanctuary, was once positioned where San Isidoro now stands.⁵⁴ Also, two *bultos* of the Virgen once occupied the *nichos* of the *retablo mayor*.

Mission San Juan Bautista also boasts one of the largest and most complete apostolic ensembles (replete with full-figure paintings of each of the twelve apostles) remaining anywhere in the California missions. The mission church also contains paintings of Our Lady of the Apocalypse and the

⁵² Jonathan Alexander, “Chapter 3: The Last Things: Representing the Unrepresentable—The Medieval Tradition,” in *The Apocalypse and the Shape of Things to Come*, ed. Francis Carey, 43–98. Quote cited from Michael Michael, “10: Trinity College Apocalypse,” 78, regarding the thirteenth century manuscript in question.

⁵³ The Chapel of Guadalupe was renamed as such in 1996 when Reverend Edward Fitz-Henry undertook the renovation of that area of the main church. At that time, Sir Richard Menn installed the large painting of the Virgen de Guadalupe within a restored sixteenth century Greco-Roman *retablo* attached to the northwest wall of that area formerly known as the “Indian Chapel.” As noted elsewhere in this paper, Norman Neuerburg in turn recovered evidence to indicate that the chapel was in fact used as a *camarín*.

⁵⁴ Sir Richard Menn (Personal Communication from Menn to Mendoza, 28 July 2004). According to Sir Richard Menn, relict evidence for the placement of the large painting of the Virgen de Guadalupe at the center of the upper tier of the *retablo mayor* remains in the form of two large wrought iron hangers that remain at the uppermost corners of the *nicho* window. In addition, Sir Richard Menn noted that Diocesan conservator Sir Harry Downie had in fact identified the original placement of the Virgen de la Soledad with the *nicho* on the lower left hand portion of the *retablo mayor*.

triumph of the archangel San Miguel, who was a pivotal figure in the advent of the Millennial Kingdom and the Book of Revelations. Taken together, I contend that the twelve *nichos* along with the eschatological iconography and period paintings provide the basis for an ecclesiastical archetype of the “Promised Land” embodied in the visage of the New Jerusalem described in the Book of Revelations and in the works of the prophet Ezekiel.

In the Book of Revelations (12:1–6), John says “I saw a woman clothed with the sun, with the moon beneath her feet, and a crown of twelve stars on her head.” Biblical scholars have interpreted the lady in question to represent both the Church and the Virgin Mary. The lunette upon which Our Lady of the Apocalypse stands and the stars atop her head reappear with the Indian Church in the form of the *tilma* of Juan Diego and in the Mexican image of the Virgen de Guadalupe. In sum, the apocalyptic imagery of the Book of Revelations has permeated much of the ecclesiastical iconography of New Spain and by extension, Alta California.

ECCLESIASTICAL NUMEROLOGY

A complex corpus of numerical symbolism centered on multiple manifestations of the numbers three, seven, twelve, and fourteen, is to be found

in a host of related architectonic contexts at San Juan Bautista. The central nave of the three-aisled sanctuary is enclosed by an arcade composed of twelve massive pillars. The twelve pillars support a constellation of two arcades of seven arches each for a total of fourteen arches which are flanked by the fourteen framed canvas paintings of the *Via Crucis*. These paintings were delivered to the mission and installed in the sanctuary nave in 1818.⁵⁶ While the twelve pillars constitute a numerical analog to the twelve tribes of Israel, the twelve apostles, and the twelve gateways into the Heav-

⁵⁶ As noted by Fray Estevan Tapis and Fray Felipe Arroyo de la Cuesta in their *Ynforme* of December 31, 1818. According to the report of that year, “Se ha añadido 14 Lienzos de la *Via Crucis*, y 24 candeleros chicos de cobre. Se ha hecho el Altar mayor de tablas, y se ha pintado.”

Figure 6: Diagram of the *retablo mayor* from the mission church of San Juan Bautista. The current placement of the *bultos* is as follows: (1) San Antonio de Padua, (2) Santo Domingo, (3) San Francisco de Asís, (4) San Isidoro, (5) San Juan Bautista, and (6) San Pascual Bailón. The original altar configuration saw the placement of the Virgen de Guadalupe at position number 2, and Nuestra Señora de la Soledad at position number 4.⁵⁵

⁵⁵ The order of the *bultos* is based on a personal communication with Sir Richard Menn, July 28, 2004. Illustration after Norman Neuerburg, 1987, with modifications. Norman Neuerburg, *The Decoration of the California Missions* (Santa Bárbara: Bellerophon Books, 1987).

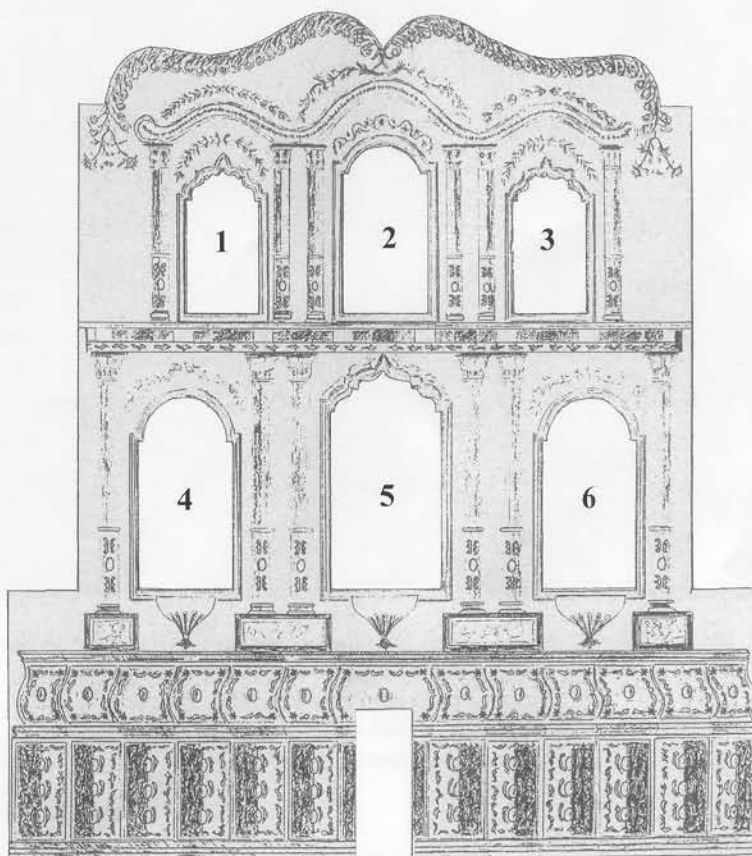




Figure 7: This painting of Our Lady of the Apocalypse remains part of the period collection of the mission church of San Juan Bautista. Note the presence of wings, stars in her cape, and a lunette at her feet.
© Rubén G. Mendoza, 2001.

only Kingdom, the number seven symbolized the very concept of perfection itself. The numbers seven and twelve were used interchangeably and recurrently throughout the books of the Old and New Testament to allude to that which is divine and which constitutes perfection.

The elaborately painted redwood-plank *retablo mayor* depicts the twelve foundational columns of the New Jerusalem in the form of twelve marbled green columns that frame each of the six *nichos* of the main altar screen (see Figure 6, above). The lower portion of the base of the three-tiered redwood-plank *retablo mayor* repeats the numerical pattern in a series of twelve rectangular red-and-yellow painted panels, each of which incorporate three *mandorla* icons.⁵⁷ The icons are also known as the *Vesica Piscis* or Vessel of the Fish. They consist of an almond-shaped aureole of divine light or the arc of two circles. They are often used to frame the images of saints, as well as the Virgin Mary and Christ. A well-known version of this icon appears in a twelfth-century panel at Chartres Cathedral that depicts the “Christ of the Apocalypse” within a *mandorla*.⁵⁸ The number twelve is repeated immediately above the panels by a layer of bowed and truncated panels. These panels form the upper half of the base upon which the second stage or tier rests. This second stage supports the lower six marbled green columns. An additional six columns frame three *nichos* placed within the third or upper tier of the *retablo* ensemble. Again, the *mandorla* appears at the center of each bowed panel.⁵⁹

⁵⁷ CSU Monterey Bay student Shari René Harder first brought this icon’s identification with the “Christ of the Apocalypse” to my attention in a communication on March 11, 2005.

⁵⁸ Barbara G. Walker, *The Woman’s Dictionary of Symbols and Sacred Objects* (San Francisco: Harper San Francisco, 1998).

⁵⁹ The *mandorla* in this instance may signify the scalloped (baptismal) shell identified with the iconography of Saint John the Baptist as well as Catholic pilgrims. The scalloped doors of the mission church and *camarín* extend the symbolism to the whole of the church building.

Branches or vines are depicted on the painted compositions of the *retablo mayor*, as well as on the original painted archways of the church arcade. These branches or vines are possible allusions to the mystical vine cited in the Gospel of John 15: 1–8, where Jesus implores his followers to remain true to the faith, for “I am the vine; you are the branches. Those who remain in me, and I in them, will produce much fruit.”⁶⁰ In this analogy, Jesus is the vine and the branches represent the faithful. The presence of the mystical vine throughout the body of the church (and the body of Christ) extends the theme of salvation and redemption throughout the entire sacred space.

The number three, which symbolizes the Holy Trinity and the *propylaeum* gateway of the east, was replicated in the layout of the central nave and two side-aisles of the church.⁶¹ The main façade of the mission church, oriented to the Midwinter solstice sunrise at 126 degrees east of north,⁶² incorporates the symbolism of the three gateways of the east in the form of three dominant archways that frame the portico fronting the church doors. These serve to replicate the “triumphal archway” identified with the gateway of the Heavenly Kingdom.⁶³ Apparently, the symbolism in question was not lost on Reverend Cipriano Rubio (1865–1875) who installed a Victorian styled gateway screen to enclose the portico and the *propylaeum* fronting the main doors of the church.⁶⁴ At the apex of this screen the following

words were inscribed: “*Hic domus Dei est, et porta coeli*,” (“Here is the house of God, and the gate of Heaven”).⁶⁵ Located within the framework of the main façade and immediately above the inscription lies the rectangular window that serves as the *tragaluz* or swallower of light. Through this window the Midwinter solstice sun forms a beam of light that illuminates the *retablo mayor* and the *santa sanctorum* embodied in the gilded Eucharistic tabernacle intended to house the body and blood of Jesus Christ the Messiah—in effect, *Cristo-Helios* (the solar Christ).⁶⁶

INVOKING THE SOLAR CHRIST

Franciscan missionaries of the sixteenth through the nineteenth centuries invariably advanced a number of celestial metaphors in their efforts to render the scriptures palpable to American Indian converts in Mesoamerica.⁶⁷ In so doing, they equated the sun with Christ the Messiah, who was also the Son of God and the Light of the World. The cross was identified with those rays of light that emanate from the sun itself.⁶⁸ Jaime Lara’s seminal paper on the manifestation of the

School of Church Music (Santa Bárbara, California: Mission Santa Bárbara, 1931). In 1996, Reverend Fitz-Henry and I salvaged the inscribed wooden archway panel in question from debris strewn throughout the *sala* and adjacent rooms of the *Casa Parroquial* (museum) area. Fitz-Henry reinstalled the archway panel atop the original doorway screen that had been recycled some years ago for the purpose of enclosing the boiler room located behind that area since rededicated for use as the Blessed Sacrament Chapel.

⁶⁰ *Life Application Study Bible: New Living Translation*, 1657.

⁶¹ According to Fray Bartolomé de las Casas, cited in Lara, *City, Temple, Stage*, 194, during Corpus Christi processions “. . . the entire street was divided into three lanes, like the naves of a church . . . [and down the middle nave] . . . passed the Most Holy Sacrament.” The people passed down the outer naves. The central column of the procession constituted the pathway of the Sacramented sun in those rites devoted to solar Eucharistic worship.

⁶² Azimuth bearing first documented in relation to research undertaken by this investigator during the course of the Midwinter solstice event of December 21, 2000.

⁶³ Lara, *City, Temple, Stage*, 18–19.

⁶⁴ Fr. Zephyrin Engelhardt, O.F.M., *Mission San Juan Bautista: A*

⁶⁵ The Reverend Rubio undoubtedly cited this passage from *The Roman Missal* and its instructions on the consecration and dedication of church structures.

⁶⁶ Lara, “Helios Americano” and “The Sacramented Sun”; Lara’s study in this regard stems from an earlier study titled “Cristo-Helios Americano: La aculturación del culto del sol en el arte, arquitectura y liturgia de los virreinos de Nueva España y el Perú,” Catholic University of America, Conference on the Hispanic Presence in the United States Catholic Church, May 1997.

⁶⁷ Louise M. Burkhart, “The Solar Christ,” *Ethnohistory* 35.3 (Summer 1988): 234–256; Edgerton, *Theaters of Conversion*.

⁶⁸ Sandstrom, “Nahua Blood Sacrifice,” 3.

cult of *Cristo-Helios* in Latin America makes clear the universality and antiquity of this theme in the Indian Church of the Americas. It is perhaps not surprising therefore, that Lara has determined that the sunburst monstrance (*custodia, ostensorium*) in fact originated among the mendicant orders of the Americas.⁶⁹ According to Lara, “it appears that solar iconographic associations to the Eucharistic host first took place in the New World, where from an early date Christ’s Eucharist presence is called the Sol Sacramentado, the Sacramented Sun, or the Divino Sol, the Divine Sun.”⁷⁰ So entrenched was solar Eucharistic worship in the Americas that in 1795 the *Constitutions of the Diocese of Guamanga, Peru* attempted to suppress the sunburst monstrance itself.⁷¹

The Mesoamerican legacy identified with solar Eucharistic worship has had a profound and lasting impact on many an Indian community of the region. According to Alan R. Sandstrom, “For the Nahuas, the summit [of Mount Postectli] is associated with Tonatij, the sun spirit. In an interesting case of syncretism, the Nahuas refer to the sun as Jesus, and they view the cross as a symbol of solar heat and power.”⁷² By contrast, the Marian cult, notably the cult of the Virgen de Guadalupe, took the moon and its lunar associations as the iconographic counterpart to Jesus Christ and the sun.⁷³ The Mesoamerican identification of Father Sun and Mother Moon with pre-Hispanic celestial and terrestrial divinities and supernaturals, has been well established by scholars.⁷⁴ The prophe-

sized return of the Messiah from the East (the place of the rising sun) was the scriptural inspiration for the ecclesiastical incarnation of the solar Christ identified by Louise Burkhart, Jaime Lara, and others from Náhuatl and other Mesoamerican and Peruvian doctrinal texts produced and employed in the colonial era.⁷⁵ This syncretic equation of the spiritual with the celestial or astronomical had such a profound influence that many native peoples of Mesoamerica and Peru continue to identify the sun and its light with the Messiah and his cross. Many depictions of this sort exist. For instance, the depiction of a mustacheod *mestizo* version of the solar Christ can be seen on the frescoed ceiling of the library of Mission Nuestra Señora de la Concepción de Acuña in San Antonio, Texas. Interestingly, George Dawson, a docent for the San Antonio Missions National Historic Park, recently documented a Midwinter solstice illumination of the side altar of the mission church at that site as well.⁷⁶

Alan R. Sandstrom’s fieldwork among the Nahua peoples of the community of Puyecaco in the *municipio* of Ixhuatlán de Madero (northern Veracruz, Mexico,) makes clear the intensity of the corollary identification and syncretism at play in this regard.⁷⁷ In his paper about Nahua blood sacrifice and pilgrimage to the sacred mountain of Postectli, it is clear that the notion of the solar Christ is alive and well and is the subject of a phenomenal cult to the solar deity who is the Christ of the “Last Judgment” and the gatekeeper of the Apocalypse. The pilgrimage to the summit of Postectli, where missionaries erected a massive wooden cross, is conducted just prior to the Midsummer solstice zenith passage.⁷⁸ This massive

⁶⁹ Lara, “The Sacramented Sun,” 285–286.

⁷⁰ Ibid., 285–286.

⁷¹ Ibid., 286.

⁷² Sandstrom, “Nahua Blood Sacrifice,” 3. Ironically, according to Sandstrom, a massive wooden cross was erected at the summit of Mount Postectli to symbolize “the conquest of Christianity over the Native American religions.”

⁷³ The iconography of the crescent moon is so fundamental to the Marian cult that it appears in the image of the Virgen de Guadalupe found on the *tilma* of Juan Diego. As previously noted, the Our Lady of the Apocalypse from the Book of Revelations constitutes the original source of that iconography identified with the crescent moon.

⁷⁴ Lara, “The Sacramented Sun.”

⁷⁵ Louise M. Burkhart, “The Solar Christ.”

⁷⁶ Personal Communication from Dawson to Mendoza, March 8, 2005; and Dawson, “Sunset at Mission Concepción: Coincidence or Calculation?” Draft received April 21, 2004.

⁷⁷ Sandstrom, “Nahua Blood Sacrifice,” 3.

⁷⁸ Ibid., 2–6. The specific period encompassed by those preparatory rites and the pilgrimage documented by Alan R. Sandstrom and family span the period of June 13–17, 2001.

cross is venerated by the Nahua as the physical embodiment of the sun's light and power. Blood sacrifice is thought to conjure the powerful supernatural and celestial forces identified with the sun, and thereby the transfigured Messiah.

Having detailed the ecclesiastical ensemble and iconographic vocabulary inherent in the art and architecture of Mission San Juan Bautista, I now move to contextualize the cultural and liturgical significance of this newfound geometry of light for Mission San Juan Bautista and other California and Southwest missions. The discussion builds upon the previous analysis of azimuth-based architectural orientations and the eschatological iconography of the Franciscan mission churches and monasteries of California and the Southwest.⁷⁹ As might be concluded from the foregoing discussion, the question of intentionality regarding those astronomically significant (azimuth) building alignments in question is taken by this investigator to constitute a moot point.

SACRAMENT OF THE SUN

This entire analysis is the direct byproduct of a growing fascination on my part with examining the evidence and finding intent and purpose in those azimuth-based architectural orientations identified to date as a result of the Mission Solstice Survey launched in 2000. On December 21, 2000, I witnessed the incredible spectacle of the Midwinter solstice illumination of the *retablo mayor* and Eucharistic tabernacle of San Juan Bautista.⁸⁰ The Midsummer solstice azimuth orien-

tation of 126 degrees east of north set the stage for the spectacular illumination of the *retablo mayor* at first light (ca. 7:15 A.M.), and shortly thereafter (ca. 7:30 A.M.), the precisely centered illumination of the Eucharistic tabernacle enclosure containing the Blessed Sacrament and Host of the Risen Christ.⁸¹ The Midwinter solstice "window of light" that illuminates the sanctuary does so in the form of a luminous rectangle of sunlight that first appears immediately to the right of the *nicho* located in the lower left portion of the *retablo mayor*. According to Sir Richard Menn, that specific *nicho*, which today houses the figure of San Isidoro, originally housed the figure of Nuestra Señora de la Soledad.⁸² The Marian cult affinities of the church at San Juan Bautista are manifest in its earliest furnishings and liturgical accoutrements.⁸³

One additional point of similarity should be noted with respect to that trajectory of "first light" that illuminates the sanctuaries of both Mission San Juan Bautista (ca. 1803–1812) and the Santa Lucía Stone Church at Carmel (ca. 1793–1797). The "first light" of the Midwinter solstice sun at San Juan Bautista strikes the portion of the *retablo mayor* situated immediately above and perpendicular to the floor crypt of Fray

⁷⁹Rubén G. Mendoza, "Theaters of Light: Astronomy and Sacred Geometry in the California Missions."

⁸⁰Admittedly, I first observed the illumination of a banner of the Virgen de Guadalupe on December 12, 1997, but failed to connect the beam of light in question to the Midwinter solstice. At that time I was unaware that the same beam of light served to illuminate the Eucharistic tabernacle. Ironically, at that same time, I was seeking an explanation for the archaeological discovery that the footprint of the mission church lay some three to four degrees off kilter with the otherwise square footprint of the quadrangle proper.

⁸¹Dr. Anthony Aveni (Personal Communication from Aveni to Mendoza, May 2003) recently acknowledged that the Midwinter solstice sun may be viewed for several days prior and subsequent to meridian alignment with little noticeable (or visually discernable) change.

⁸²Personal Communication from Menn to Mendoza, July 28, 2004. It should be noted that the *bullo* of Our Lady of Solitude now occupies the painted side altar on the courtyard-oriented portion of the three-aisled church at San Juan Bautista. Sir Harry Downie originally provided the white garment worn by the *bullo* during the course of renovations at Mission San Juan Bautista in 1976. According to Sir Richard Menn, the garment originally served as the First Communion dress of Sir Harry's daughter, Miriam Downie.

⁸³The Virgin's corollary identification with the Catholic Church and Our Lady of the Apocalypse lends further legitimacy to her presence in the *retablo mayor* in this instance. Throughout Europe, church structures were invariably dedicated to Our Lady.

Estevan Tapis. The Midsummer solstice illumination at Mission San Carlos Borromeo first manifests over the conjoined floor crypts of the founders of the earliest California missions—Fray Juan Crespí (d. 1782), Fray Junípero Serra (d. 1784), and Fray Fermín Francisco de Lasuén (d. 1803).⁸⁴ It is significant that the first three founders and presidents of the California missions, Serra, Lasuén, and Tapis, were each buried in the portion of the mission church sanctuary (at each respective site) identified with Midwinter and Midsummer solstice illuminations of the *retablo mayor* and Nuestra Señora de la Soledad on the one hand and Nuestra Señora de Belén on the other.⁸⁵

Taken together, each of these mission sites, with their respective solstice illuminations, serves to encompass and frame the signal events in the life of Christ. At Carmel, his birth is recalled by Nuestra Señora de Belén. At San Juan Bautista, his death and resurrection are recalled by Nuestra Señora de la Soledad. Saint John the Baptist prophesized the coming of the Messiah Jesus Christ—the Light of the World. The Marian cult affinities of Saint John the Baptist with the Virgin Mary and her incarnation as Our Lady of Bethlehem are many and legion. Jesus was born in the town of Bethlehem on or about the period of the Midwinter solstice sunrise (December 21) or Epiphany (January 6).

The most ancient and universal rites devoted to the celebrations of the Midwinter solstice signified the birth or return of the sun by virtue of its relationship to the shortest and darkest days of the year. For this reason the Ohlone Costanoan peoples of the California central coast both feared and celebrated this significant celestial event each

year.⁸⁶ Similarly, Roman celebrations devoted to *Sol Invictus* took place each December 25 and followed the rebirth of the sun at Midwinter solstice. According to Jaime Lara, “Liturgical scholars believe that the dating of Christ’s birth on December 25 was a deliberate attempt to replace the pagan feast of the Invincible Sun with the true Sun of Justice.”⁸⁷ The Midsummer solstice, by contrast, signaled the death and resurrection of the sun by virtue of its inherent identification with the longest and brightest days of the year—after which each subsequent day grows ever shorter and darker until the rebirth of the sun and Messiah at that point defined by the Midwinter solstice sunrise. Ultimately, I believe the key liturgical symbolism identified with both the birth and death of Christ is uniquely manifest in the distinct but complementary patron saints and solstice illuminations of both San Juan Bautista and San Carlos Borromeo. I contend that the solar illumination of the Eucharistic tabernacle at each site was conceived so as to acknowledge the transfiguration of the Eucharistic host and the return of the Messiah.

THE GEOMETRY OF LIGHT

Solar geometry is the area of study that seeks to understand the sun’s relationships to architectural form and orientation. It also is the dimension of architectural planning that seeks to channel the sun’s light in such a fashion as to highlight practical, aesthetic, and/or symbolic elements of the built environment. Where religious structures are concerned, architects and builders often made use of the interplay of light and shadow, the directionality of sunlight and the objects highlighted by the light, for symbolic and spiritual effect.⁸⁸ Where San Juan Bautista is concerned, this latter

⁸⁴ This investigator first documented the Midsummer solstice illumination of the tabernacle at the San Carlos Basilica on the week of June 22, 2003.

⁸⁵ The *bulto* of Nuestra Señora de la Soledad is purported to have originated at Mission Soledad. One other as yet established identification of this *bulto* is with Nuestra Señora de los Dolores.

⁸⁶ Maynard Geiger and Clement Meighan, *As the Padres Saw Them* (Santa Bárbara: Santa Bárbara Mission Archive Library, 1976), 92.

⁸⁷ Lara, “The Sacramented Sun,” 264.

⁸⁸ Manuela Incerti, “Solar Geometry.”

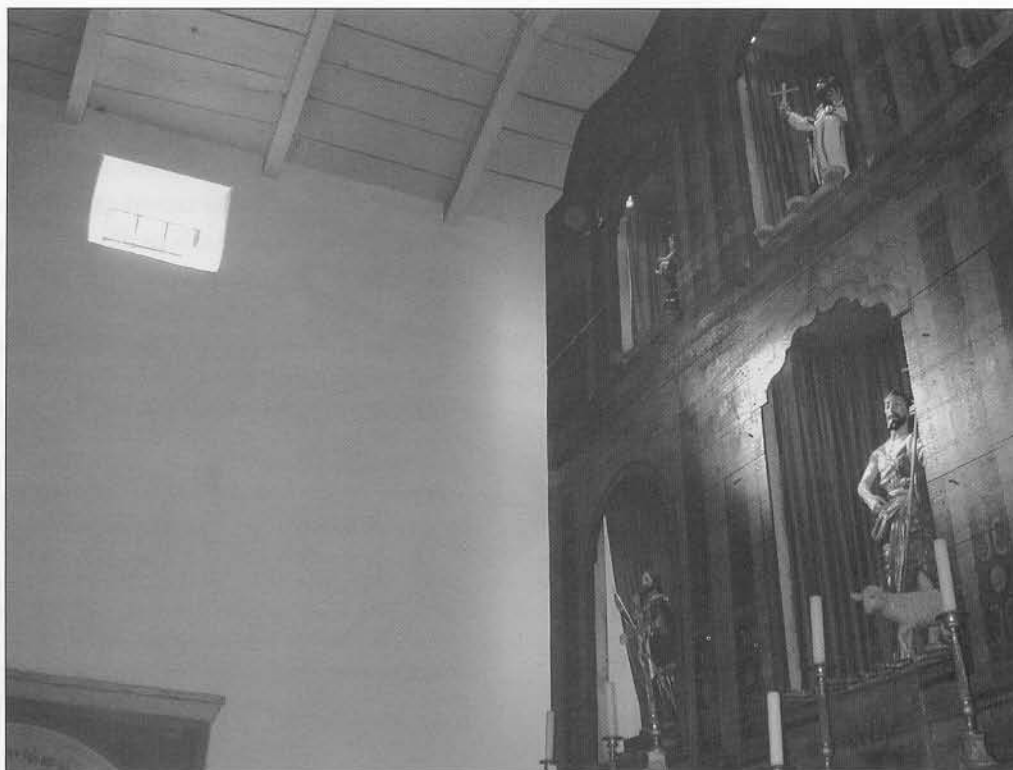


Figure 8: Midwinter solstice illumination of Saint John the Baptist at noon on December 22, 2002. Note clerestory window light source in upper left portion of the image.
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intent is manifest in the astronomically significant (Midsummer solstice) orientation of the church and in the placement of a number of windows (or gnomens) that apparently served to illuminate key icons within the sacred geometry and ecclesiastical landscape of the Old Mission Church. Other similar solstice and related feast day phenomena identified with the solar geometry of San Juan Bautista have since been documented and recorded by this investigator in other related contexts throughout California, the American Southwest, and Querétaro.⁸⁹ It should be noted, however, that the analysis of the solar geometry of San Juan Bautista is far from complete.

In fact, additional observations undertaken at mid-day on December 22, 2002, opened another and originally unforeseen dimension on the geometry of light at San Juan Bautista. At pre-

cisely noon, the patron saint located at the center of the *retablo mayor* was directly illuminated by a brilliant beam of sun light cast through a clerestory window located immediately to the south of the *bulto* of San Juan Bautista. The illumination lasted for approximately thirty minutes. Further investigation into the solar geometry of the church sanctuary was rewarded on January 6, 2003—Epiphany or *Día de los Reyes Magos*. On that day, each of the clerestory windows located at the summit of the wall atop the southwest arcade served as gnomens for the sequential illumination of each of the first six paintings of the *Via Crucis* located on the opposite side of the cen-

⁸⁹ Mendoza, "Skywatchers of the Millennial Kingdom."

tral nave of the church. It should be noted that these first six paintings are positioned over each of six columns that serve to sustain the northeast arcade on the cemetery side of the church. Finally, at approximately 1:35 P.M. on January 6, 2003, a single clerestory window located at the summit of the wall of the southwest arcade illuminated the *bulto* of the Child of Prague⁹⁰ located on the side-aisle altar situated nearest the cemetery side of the church. According to Sir Richard Menn, the side-aisle altar in question is thought to have

served as the staging area for the colonial era placement of the Nativity scene complete with manger and Christ child. Since Epiphany formally closes the Nativity season, the illumination on that date of this most sacred cast of characters (including the three Arab or Persian “astronomers” or *Reyes Magos*) appears quite intentional.⁹¹

⁹⁰ Although identified by Reverend Fitz-Henry as the Child of Prague, this specific saint was only recently introduced into that location of the side aisle. However, a corollary identification with the Santo Niño de Atocha might be appropriate given the Hispanic affinities of the Church and its sanctuary. Nevertheless, the Christ child is manifest in the symbolism identified with either *bulto*.

⁹¹ Significantly, the clerestory windows in question were added subsequent to the 1812 construction date for the Church. According to Sir Richard Menn (Personal Communication from Menn to Mendoza, July 28, 2004), when the Church arcade was first sealed and the side aisles enclosed, clerestory windows were cut through the adobe walls to permit the entry of window light into the otherwise darkened sanctuary. This fact would have permitted Fray Felipe Arroyo de la Cuesta to position the windows to strategic advantage. To accommodate the addition of the clerestory windows, it was first necessary to dismantle the *ochovado* (pitched) portions of the ceiling. The only remaining portion of the original *ochovado* ceiling has been preserved in the area immediately over the *retablo mayor*.



SAN CARLOS DE MONTEREY

After a protracted period of observation and anticipation, this investigator was rewarded on June 23, 2003, with an unusually successful effort to document and record the Midsummer solstice illumination of the Eucharistic tabernacle located within the Santa Lucía Stone Church.⁹² On that day and those that followed, I stood transfixed and awed by each consecutive illumination—at first light—of the Virgen de la Purísima Concepción located immediately above the crypt of Fray Junípero Serra.⁹³ From that point on, and through the course of the next thirty to forty minutes

⁹² Reverend Emil Robu of Mission San Carlos Borromeo was initially quite skeptical of my findings from Mission San Juan Bautista. As fate would have it, Reverend Robu chanced upon the illumination of the altar on Ascension Sunday, June 2, 2003. Because of the Reverend's particular description of an illumination that centered on the massive crucifix located high on the face of the existing *retablo mayor*, I reasoned, and thereby anticipated, that the illumination observed by Reverend Robu was in fact a precursor to the Midsummer solstice illumination of the tabernacle of the Santa Lucía Stone Church at Carmel.

⁹³ The *retablo mayor* or *reredos* currently in situ within the Santa Lucía Stone Church was originally fabricated and installed by Sir Harry Downie within the apse of the church in April 1956. While the modern altar screen maintains some basic similarities to that depicted in a period painting of the Santa Lucía Stone Church of the early 1800s, the original *retablo mayor* centerpiece (now occupied by the large crucifix) contained the *bulto* of Nuestra Señora de Belén (a.k.a. La Conquistadora) now located in the funerary chapel of 1814. Nuestra Señora de Belén, along with its Marian cult affinities, was central to the devotions of Fray Junípero Serra. The *retablo mayor* and the Santa Lucía Church with its *mudéjar* star window constitute devotional imagery specific to that aspect of the Marian cult pertaining to Nuestra Señora de Belén and the Bethlehemite order (founded 1658).

Figure 9: Feast Day illumination of three of the fourteen Stations of the Cross at San Juan Bautista shortly after 1:00 P.M. on January 6, 2003. Each of six stations hung on the arcade that constitutes the northeast side of the central nave are illuminated in succession by the clerestory windows on the opposite side of the sanctuary.
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beginning at 6:10 A.M., the gilded Eucharistic tabernacle at the heart of the *retablo mayor* was literally and figuratively transformed into the transfigured embodiment of *Cristo-Helios*. Ultimately, the transfiguration and the apparition of the solar Christ manifests itself within the context of an architectonic whole originally designed and envisioned to conjure the terrestrial paradise so long anticipated by those faithful who participated in liturgical rituals meant to recall the biblical accounts of the Millennial Kingdom.

THE WINDOWS OF PERCEPTION

For the Ohlone Costanoan Esselen peoples who once populated what was then known as La Misión de San Carlos de Monterey,⁹⁴ those rites identified with the Midsummer solstice sun were deemed pivotal to the veneration of the ancestors and the well-being of these ancient peoples of the California central coast.⁹⁵ Where the Costanoan and particularly the Ohlone Mutsun (San Juaneros or Mutsunes of San Juan Bautista) are concerned, the vast majority were devotees of an ancient tradition centered on Midwinter solstice rites of passage and renewal.⁹⁶ According to Travis Hudson, ethnographer John P. Harrington documented that “the Costanoans observed the winter solstice and used it in their descriptive calendar.”⁹⁷ Fr. Maynard Geiger and Clement Meighan cite a Franciscan

⁹⁴ Fray Junípero Serra and his colleagues all consistently used the name San Carlos de Monterey to identify what is today referred to as Mission San Carlos Borromeo. The *Ynformes de la Misión de San Carlos de Monterey* document this usage from 1770–1771 through the period of secularization in 1834.

⁹⁵ Travis R. Hudson, “Costanoan Astronomy from the Notes of John P. Harrington,” *Journal of California and Great Basin Anthropology* 4.1 (1982): 109–112. Hudson interprets Harrington's notes to indicate that the Esselen celebrated the Midwinter as opposed to Midsummer solstice zenith passage.

⁹⁶ Fray Felipe Arroyo de la Cuesta (1809–1833) makes specific reference to the Ohlone—who occupied the area in and about Mission San Juan Bautista—as San Juaneros or Mutsunes.

⁹⁷ Travis Hudson, “Costanoan Astronomy,” 111; John P. Harrington, “Culture Element Distributions: XIX: Central California Coast,” *University of California Anthropological Records* 7.1 (1942): 29.

friar from Mission San José who acknowledged that “they adored the sun when it receded towards the south pole. They thought it was angry and they held dances in its honor and offered it seeds, etc., until they knew it was about to return to them.”⁹⁸ Of the eleven California mission sites determined in this investigation to integrate astronomically significant azimuth-based architectural alignments, it is probably no coincidence that Mission Santa Bárbara and Mission San Juan Bautista were poised to capture the Midwinter solstice sun on meridian alignment with the central axis of the church. Though positioned on an azimuth bearing that facilitates the illumination of the *retablo mayor*, and thereby frames the December 4 and December 6 feast days identified with Santa Bárbara’s patron saint, it is my contention that the Chumash Indian builders of Mission Santa Bárbara, like their Ohlone Mutsun counterparts at San Juan Bautista, played a much larger role in determining the azimuth orientation of the final foundational plan of the Mission Church than has been heretofore acknowledged.⁹⁹ Therefore, it is not surprising that the Chumash Indians of the Santa Bárbara Channel, and the San Juaneros or Mutsunes of San Juan Bautista, celebrated the Midwinter solstice sunrise as the most sacred and revered spiritual event of the year.¹⁰⁰ I believe that the largely undocumented and unstudied role of Tlaxcaltecan and that of other Mesoamerican Indians among the colonists and builders of the mission communities of the Northern Frontier, will shed new light on the adoption and accommodation of solar Eucharistic worship by the native peoples of the Californias.

⁹⁸ Geiger and Meighan, *As the Padres Saw Them*, 92.

⁹⁹ Travis Hudson, Georgia Lee, and Ken Hedges, “Solstice Observers and Observatories in Native California,” *Journal of California and Great Basin Anthropology* 1.1 (1979): 39–63.

¹⁰⁰ Travis Hudson and Ernest Underhay, *Crystals in the Sky: An Intellectual Odyssey Involving Chumash Astronomy, Cosmology and Rock Art*, Ballena Press Anthropological Papers, No. 10 (Socorro, NM: Ballena Press, 1978); Christina Foss, Personal Communication to Mendoza, September 3, 2003.

In a world of millennialist mysticism, the syncretic accommodation of the *Cristo-Helios* undoubtedly found currency in native communities throughout the Americas.¹⁰¹ In their efforts to retain and perpetuate core elements of ancient and traditional practice against the onslaught of the Hispanic invasion, aboriginal communities necessarily responded to this monumental crisis via patterns of active resistance, intercultural conflict, ritual substitution, and syncretic accommodation.¹⁰² For the Hispanicized Indian convert or neophyte, the yearly apparition of the *Cristo-Helios*—within the confines of that terrestrial paradise touted as the embodiment of the Millennial Kingdom—surely served to validate prevailing belief and faith in the apocalyptic genesis of an “age of peace, justice, and prosperity.”¹⁰³ Tragically, however, this new age of hope and faith materialized in tandem with the catastrophic consequences of culture contact visited upon the aboriginal peoples of California and the Americas. Ultimately, the long anticipated advent of the Millennial Kingdom was conjured within the apocalyptic aura of “a cataclysm from which the world is to emerge totally transformed and redeemed.”¹⁰⁴

CONCLUDING REMARKS

Unfortunately, prevailing stereotypes and popular misconceptions regarding the early Hispanic colonial missions of Alta California continue to paint a cultural history largely devoid of science, tech-

¹⁰¹ Lara, “The Sacramented Sun,” 289–291.

¹⁰² *Ibid.*, 289. Lara discusses the general principles of “dynamic equivalence” and “ritual substitution” in terms of what the mendicant orders were doing to facilitate the inculturation of the Christian faith. I contend that the Neophytes were engaged in ritual substitution to accommodate those elements of the faith they deemed appropriate and acceptable to the inculturation process so engaged.

¹⁰³ Frank Graziano, *The Millennial New World* (New York: Oxford University Press, 1999), 6.

¹⁰⁴ Norman Cohn, *The Pursuit of the Millennium* (New York: Oxford University Press, 1970), 281; cited from Graziano, *The Millennial New World*, 6.

nology, medicine, and innovation.¹⁰⁵ Therefore, it is perhaps a tribute to the highly eclectic renaissance genius of Fray Felipe Arroyo de la Cuesta, a trained linguist, ethnographer, humanist, musician, architect, clock-maker, astronomer, and builder of the mission church of San Juan Bautista, that this study is necessarily devoted. Fray Arroyo de la Cuesta's own devotion to the Ohlone Mutsun community of San Juaneros spanned the period extending from 1809 through 1833. His exploits encompassed the build-out of the main church and neophyte housing areas, and the creation of a Mutsun grammar, not to mention a host of mission hymnals and period documents. An ability to speak and sing the liturgy in some thirteen Costeño Indian dialects as well as his documented role as the mounted leader of native raiding parties, suggests that Fray Arroyo de la Cuesta enculturated and was enculturated by the indigenous peoples that he served until the day of his forced departure from Mission San Juan Bautista.¹⁰⁶

Invariably then, consideration of the melding of Franciscan Catholicism and Hispanicized Indian beliefs, cultural mores, and religious traditions must be understood from within the mirrored framework of intercultural interaction, reflexivity, and *mestizaje*.¹⁰⁷ It is therefore the mission and mandate of this investigation to more fully delve into the intercultural and culturally eclectic evidence of what is generally construed to constitute the now largely unexplained and largely unexplored "hidden traditions" of sacred geometry, millenarian mysticism, and colonial era Christian cosmology in Alta California and the Greater Southwest.

¹⁰⁵ See Iris Engstrand, *Spanish Scientists in the New World: The 18th Century Expeditions* (Seattle: University of Washington Press, 1981).

¹⁰⁶ Fray Arroyo de la Cuesta was ordered to vacate Mission San Juan Bautista as per the dictates of the secularization decree of the day. Accordingly, Ohlone Mutsun elders are documented to have come to the disabled Padre's defense, and subsequently, to have wept upon his departure.

¹⁰⁷ Edgerton, *Theaters of Conversion*.

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RUBÉN G. MENDOZA is Professor of Archaeology and Social and Behavioral Sciences, and the Founding Director of the Institute for Archaeological Science, Technology, and Visualization, at California State University, Monterey Bay. Professor Mendoza is a California native who obtained his B.A. degree at California State University, Bakersfield, and his M.A. and Ph.D. in the Department of Anthropology at the University of Arizona, Tucson. Like so many other long time residents, his interest in the California missions was inspired by a fourth-grade field trip from Fresno to Mission San Juan Bautista in 1965. While growing up in Bakersfield, Mendoza was drawn to archaeology and the study of the pre-Hispanic peoples of Mesoamerica and participated in community, college, and university archaeological projects in association with the Kern County Archaeological Society. To date, Professor Mendoza has served as both project archaeologist and principal investigator to four major projects, three of which include the missions and monasteries of the ex-convento de la Purísima Concepción (Puebla, Mexico), San Juan Bautista, and San Carlos Borromeo. Mendoza's publications have appeared in Scribner's Sons, Oxford University Press, Kluwer Academic, Blackwell Press, Arte Público, to name a few.